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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,983	10/02/2003	Grigoriy Grinberg	CS-21369	7792

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EXAMINER	
JACKSON, MONIQUE R	
ART UNIT	PAPER NUMBER
1773	

DATE MAILED: 03/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/675,983	Applicant(s) GRINBERG ET AL	
	Examiner Monique R Jackson	Art Unit 1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

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DETAILED ACTION

Claim Objections

1. Claim 16 is objected to because of the following informalities: the term “following” or other similar term should be added before the word “steps” in line 2. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recites the limitation “applying a thermal spray material” but does not specify that the application method is by thermal spraying and hence the claims are confusing and it is unclear as to what is actually required of the claimed invention.

4. Claims 2-19 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 2 recites the limitation “method of claim 1 wherein step (b) is modified as follows: (b’) integrating the thermal spray material...” however it is noted that claim 1 recites that step (d) corresponds to integrating the thermal spray material not step (b) hence it is unclear whether Applicant meant to recite “wherein step (d) is modified” or whether Applicant meant to replace original step (b) which refers to applying a release agent.

5. Claims 5-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as

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the invention. Claims 5-8 recite the limitation “selected from the group comprising” and though alternative expressions are permissive in the claims, they should be drafted in proper alternative format, i.e. “**selected from A, B or C**”; or in proper Markush claim format, i.e. “selected from the **group consisting of A, B and C**”. A claim that recites “selected from the group comprising” as in the instant claims is improper because the term “comprising” is open transition language and may include other items that are not listed.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-15 and 18-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Milovich et al (USPN 5,073,589) wherein the Examiner assumes that Claim 2 should read “wherein the step (d) is modified as follows: (d’).” Milovich et al teach a method of producing a metal-faced composite tool comprising providing a desired master pattern surface or mold in a desired shape, coating a thin layer of parting or release agent thereto such as polyvinylacetate, polyvinylchloride and paraffin wax; thermal spraying a hot metal such as tin, zinc, aluminum and steel alloys onto the release agent to form a metal shell 15; coating the metal shell with a fiber reinforced resinous paste mixture that forms an adhesive layer 16 to the metal shell 15 and to a backing 17 comprising a mix of resin and fiber fillers to produce the tool under compression pressure (Col. 4, lines 10-68; Col. 5, lines 23-31.) The tool is then separated from the pattern surface or mold with the assistance of the parting or release agent (Col. 4, lines 51-52;

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Examples.) Milovich et al teach examples utilizing aluminum fibers and carbon fibers with epoxy resin as in instant claim 7 (Examples 2 and 3.) Milovich et al further teach that the metal is sprayed to a thickness of between 0.030 and 0.250 inches (Col. 5, lines 17-20.) With respect to Claims 10, 11 and 19, the Examiner takes the position that the thermally sprayed metal layer as taught by Milovich et al would inherently have a porosity and theoretical density as instantly claimed considering the layer is produced by the same material and method as in the instant invention.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Milovich et al. Though Milovich et al produce several composite backed tools utilizing the same pattern, Milovich et al do not specifically teach cleaning the pattern of contaminants between examples, however it is well established in the art that a cleaning step is advantageous between molding operations to remove any debris, contaminants or excess release agent between runs to provide a clean pattern for replication of the subsequent tool or molded article and would have been obvious to one having ordinary skill in the art at the time of the invention.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Domanski et al (USPN 5,427,676) provides background information on thermally sprayed molded plastic articles.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R Jackson whose telephone number is 571-272-1508.

The examiner can normally be reached on Mondays-Thursdays, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Monique R. Jackson
Primary Examiner
Technology Center 1700\
March 7, 2005